# Lottery on Chains 

Release 0.1

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Lottery on Chains is a lottery game on the blockchain. The Smart Contract defines the rules of the game. And rules are pretty simple: players are buying tickets using the blockchain tokens. The token is defined by the blockchain, for example, the BNB on the Binance Smart Chain. The tokens from sales go to the prize pool and will be used to pay prizes in a specific drawing.
See also SORT .


Once the time is over the game will be closed. After that point, players can't buy new tickets anymore. And the contract will start the drawing to determine which previously sold lottery ticket is a winner. It uses the random number generator (RNG) to get the winning number. In the new version, the Chainlink VRF will be used as RNG. Once the winner is determined, the prize pool is locked as unclaimed, and only the winner can claim it. The unclaimed prizes are stored indefinitely in the contract memory and can be claimed at any time.


At the end of the game, all tickets are being burned and the new game is started.
The rules of the game, e.g. ticket price, payout \% to the prize pool, can be changed by the organizer, but only before the game is started. The organizer can't change the rules of the already running game. So when the new player buys a ticket, he confirms the rules of the current and he can make sure that they are not changed until the end of the game.

## CHAPTER

ONE

## PRIZE POOL

The amount of tokens that goes to the prize pool is defined as
prizePool $=$ soldTickets $*($ payout $/ 100)$
The payout percentage is the contract parameter and can be set by the organizer for the next game. Usually, it's more than $90 \%$ (organizer fee in that case is less than $10 \%$ ).

The organizer, or contract creator, doesn't have access to the prize pool. He can only withdraw the profit (sales fee). If the partnership exists partner is also eligible for part of the profit (commission \%), but it does not affect the players payout, because partner gets the part of the organizer profit. Having a partner means organizer getting less profit.

The Smart Contract is open and verified - See Contract Source Code (Solidity).
To try it out Checkout the official website.
Check out the How To Play Lottery section for playing guide, including how to Connect wallet.

Note: This project is under active development.

### 3.1 SORT

Contract Address: https://bscscan.com/address/0xf0BCF57C1e3Ea0f0b2c6883Ad3cd67b3CA78F145
Chain: Binance Smart Chain (BEP20)

### 3.1.1 Basics

Make a number predictions in a lottery and win a prizes. The size of the prize depends on the amount of SORT tokens your hold.

### 3.1.2 Details

For more information check the sections below

## SORT Tokenomics

SORT coin is a utility token the dApp lottery game. It uses modern token mechanics: reflection, automatic liquidity addition and token deflation. Additionally it will provide some in-game mechanics to the holders.


## Anti-Whale Mechanics

The maximum transaction limit is implemented to protect from a large sell transaction, resulting in a dramatic drop in the prices of the token. These constraints protect token from manipulation by large holders, usually referred to as whales.

## Static-rewards

Holding rewards strategy is used. The reflect function takes $4 \%$ of every SORT token transaction, splits that fee and awards it to all holders of the token.

## Automatic Liquidity Generation

Each transaction is subject to a $4 \%$ fee, which is used to increase liquidity on PancakeSwap.

## Deflation

$3 \%$ of total supply tokens are burned by sending to the $0 x 000000000000000000000000000000000000$ dead address. Since SORT uses a reflection function it constantly receives a small portion of the reflection fee. As more tokens are transferred, more will get burned thus reducing the total supply.

## Buyback

Once the lottery contract become popular it will use the transactions fee to repurchase and burn SORT tokens. These purchasing transactions will add additional value (BNBs) to the liquidity pool and reduce the total circulating supply of tokens.

### 3.2 How To Play Lottery

### 3.2.1 Connect wallet

You need a crypto wallet on Binance Smart Chain network to play a Lottery game. The most popular wallet is a MetaMask. Please check the guide Connecting MetaMask to Binance Smart Chain.

You can also can use any other wallet with WalletConnect. See the list of supported Wallets.
If you created wallet or already have one, click the Connect Wallet button and choose the desired wallet type. At the end you will need to approve access to account information in your wallet.


### 3.2.2 Buying Lottery tickets

When you connected your wallet, you can see your account information: already purchased tickets and rewards like on the screenshot below.


You can also buy tickets now. Make sure that you agree with ticket price displayed.

1. To buy a ticket enter the amount of tickets you would like to buy into the field. You will see the estimated gas fee and the ticket price after your enter some value. The more tickets you buy, the greater the discount.
The discount starts at 2 tickets, and scales all the way to 100 tickets where you will save almost $50 \%$ on your purchase.

## ance Smart Chain


ance Smart Chain

2. Click the Buy and confirm your action in your wallet.


### 3.2.3 Viewing your tickets after buying

Once the transaction confirmed the amount of bought tickets will be reflected on your account balance.

# ance Smart Chain <br> erified Smart Contract 

Number of tickets
Buy

Ticket price: 0.01 BNB


### 3.2.4 Claiming reward

When the game has ended you can check your rewards to see if you won.

1. Click Connect Wallet to see your account details.
2. If you won you will see the rewards amount together with Claim button.
3. Click Claim button to transfer rewards to your account address.


### 3.3 Partnership

The partnership can be established by writing the partner address and his commission rate to the contract memory. One of the partnership could be, for example, advertisement support.

$$
\begin{aligned}
& \text { profit }=\text { soldTickets } *((100-\text { payout }) / 100) \\
& \text { partnerProfit }=\text { profit } *(\text { commission } / 100)
\end{aligned}
$$

For example, if commission is $50 \%$ and payout is $90 \%$, the partner will get the $5 \%$ of the total sales.


